Caulerpa taxifolia

Green algae, Caulerpa, Killer alga, Sea weed

Photo: A. Meinesz

Threat Scores

1. Ecological Impact
   - Out-competes other algal species, seagrasses & sessile invertebrates for food & light or due to toxic effects of caulerpenyne compounds
   - Its large monospecific meadows vastly reduced native species diversity & fish habitat (NIMPIS, 2002a)
   - Reduction of catches for commercial fishermen due to the elimination of fish habitat, & entangling of nets & boat propellers also affect efficiency (NIMPIS, 2002f)
   - Fish able to eat C. taxifolia, such as the Mediterranena bream (Sarpa salpa), accumulate toxins in their flesh that make them unsuitable for human consumption (Meinesz & Hesse, 1991)
2. Invasive Potential
   - Although it also reproduces sexually, settlement takes place primarily by fragmentation increasing the rate of dispersion
   - Species' success as an invader in non-native habitats is the lack of natural predators
   - Genetic evidence indicates that the most likely source of infestations in areas where C. taxifolia is not native is through release from aquaria. Once introduced, C. taxifolia spreads by fragmentation, and even a small, broken-off fragment can form a new plant
3. Geographical Extent
   - Regionally pervasive
4. Management Difficulty
   - Economic impacts of eradication include approx $US 6 million spent in Southern California by 2004 (Anderson, 2004) & $AUS 6-8 million in South Australia
   - Chemical controls

Geography and Habitat

1. Native: Caribbean coasts, Gulf of Guinea, Red Sea, East African coast, Maldives, northern Indian Ocean coasts, southern China Sea, Japan, Hawai'i, Fiji, Australia
2. Introduced: California
3. Habitat
   - Marine, intertidal zones, coral reefs, estuaries, bays, coastland
   - Substrates from rock, sand and mud to sea grasses
   - Usually found in depths of 3 - 35 m, but has been recorded to 100 m in Mediterranean

Invasion Pathways

1. Freshwater/Marine transportation - cleansing anchors and fishing nets
2. Pet, aquarium, and water garden trade - intentional release probable
3. Ballast water and sediments

Non-Native Locations

1. 58- Northern California

2. 59- Southern California Bight

Sources

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2. http://conserveonline.org/workspaces/global.invasive.assessment
3. http://swr.nmfs.noaa.gov/hcd/HCD_webContent/CAULER7.jpg